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GOSS, W. M. Subparsec-Size H I Cloudlets Associated with Orion A. *Paul P. van der Werf and W. M. Goss.* **364**, 157, 196-A5 (1990)

GOTTLIEB, C. A. Laboratory Detection of Propadienylidene, H_2CCC. *J. M. Vrtilek, C. A. Gottlieb, E. W. Gottlieb, T. C. Killian, and P. Thaddeus.* **364**, L53, 205-E13 (1990)

GOTTLIEB, E. W. Laboratory Detection of Propadienylidene, H_2CCC. *J. M. Vrtilek, C. A. Gottlieb, E. W. Gottlieb, T. C. Killian, and P. Thaddeus.* **364**, L53, 205-E13 (1990)

GRANEY, CHRISTOPHER M. Optical Coronal Emission Lines from Equilibrium and Cooling Plasmas. *Christopher M. Graney and Craig L. Sarazin.* **364**, 561, 203-B3 (1990)

GREEN, RICHARD F. *IUE* Observations of PG 1115+080: The He I Gunn-Peterson Test and a Search for the Lensing Galaxy. *Todd M. Tripp, Richard F. Green, and Jill Bechtold.* **364**, L29, 205-C7 (1990)

GREENHILL, L. J. First Images of Water Vapor Masers in the Galaxy M33. *L. J. Greenhill, J. M. Moran, M. J. Reid, C. R. Gwinn, K. M. Menten, A. Eckart, and H. Hirabayashi.* **364**, 513, 202-E1 (1990)

GREGGIO, LAURA. Clues on the Hot Star Content and the Ultraviolet Output of Elliptical Galaxies. *Laura Greggio and Alvio Renzini.* **364**, 35, 194-D12 (1990)

The Development of the Red Giant Branch. II. Astrophysical Properties. *Allen V. Sweigart, Laura Greggio, and Alvio Renzini.* 364, 527, 202-F3 (1990)

GRINDLAY, J. E. Four X-Ray–selected Cataclysmic Variables in the Galactic Plane. *P. Hertz, C. D. Bailyn, J. E. Grindlay, M. R. Garcia, H. Cohn, and P. M. Lugger.* 364, 251, 197-B8 (1990)

GWINN, C. R. First Images of Water Vapor Masers in the Galaxy M33. *L. J. Greenhill, J. M. Moran, M. J. Reid, C. R. Gwinn, K. M. Menten, A. Eckart, and H. Hirabayashi.* 364, 513, 202-E1 (1990)

HAN, INWOO. MAP–based Trigonometric Parallaxes of Open Clusters: The Pleiades. *George Gatewood, Michael Castelaz, Inwoo Han, Timothy Persinger, John Stein, Bruce Stephenson, and William Tangren.* 364, 114, 195-D5 (1990)

HARVEY, PAUL M. High-Resolution, Far-Infrared Observations of NGC 2071. *Harold M. Butner, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Antonella Natta, and Maria Sofia Randich.* 364, 164, 196-B1 (1990)

HASCHICK, AUBREY. H I Absorption and OH Emission in IC 694/NGC 3690. *Willem A. Baan and Aubrey Haschick.* 364, 65, 194-G1 (1990)

HAWARDEN, T. G. Molecular and Atomic Hydrogen Line Emission from Star-forming Galaxies. *P. J. Puxley, T. G. Hawarden, and C. M. Mountain.* 364, 77, 195-A1 (1990)

HECKMAN, TIMOTHY M. The Optical Emission-Line Nebulae of Powerful Far-Infrared Galaxies. *Lee Armus, Timothy M. Heckman, and George K. Miley.* 364, 471, 201-G11 (1990)

On the Nature and Implications of Starburst-driven Galactic Superwinds (Abstract of Paper in 1990 December Suppl.). *Timothy M. Heckman, Lee Armus, and George K. Miley.* 354, 336, 198-C1 (1990)

HEILES, CARL. Detection of an Expanding H I Shell in the Old Supernova Remnant CTB 80. *Bon-Chul Koo, William T. Reach, Carl Heiles, Robert A. Fesen, and J. Michael Shull.* 364, 178, 196-C5 (1990)

HELLABY, C. Density Waves in Cosmology. *G. F.-R. Ellis, C. Hellaby, and D. R. Matravers.* 364, 400, 200-G12 (1990)

HELOU, G. Variations in the Abundance of Transiently Heated Particles within Nearby Molecular Clouds. *F. Boulanger, E. Falgarone, J. L. Puget, and G. Helou.* 364, 136, 195-F5 (1990)

HERELD, MARK. A Subdued Interpretation of the Visual and Infrared Emission from Merging Galaxies: Application to NGC 6240. *Harley A. Thronson, Jr., S. Majewski, Lara Descartes, and Mark Hereld.* 364, 456, 201-F5 (1990)

HERRERA, L. Luminosity Profiles and the Evolution of Shock Waves in General Relativistic Radiating Spheres. *L. Herrera and L. A. Núñez.* 364, 212, 196-F4 (1990)

HERTZ, P. Four X-Ray–selected Cataclysmic Variables in the Galactic Plane. *P. Hertz, C. D. Bailyn, J. E. Grindlay, M. R. Garcia, H. Cohn, and P. M. Lugger.* 364, 251, 197-B8 (1990)

HEWAGAMA, TILAK. Observations of the 12.3 Micron Mg I Emission Line during a Major Solar Flare. *Drake Deming, Tilak Hewagama, Donald E. Jennings, Vladimir Osherovich, and Gunter Wiedemann.* 364, L49, 205-E7 (1990)

HIRABAYASHI, H. First Images of Water Vapor Masers in the Galaxy M33. *L. J. Greenhill, J. M. Moran, M. J. Reid, C. R. Gwinn, K. M. Menten, A. Eckart, and H. Hirabayashi.* 364, 513, 202-E1 (1990)

HOBBS, L. M. Predicted Profiles of Ultraviolet Interstellar Absorption Lines (Abstract of Paper in 1991 February Suppl.). *D. E. Welty, L. M. Hobbs, and D. G. York.* 364, 338, 198-C3 (1990)

HODGE, PAUL. Ultraviolet Observations of NGC 205. *Eric M. Wilcots, Paul Hodge, Paul B. Eskridge, Francesco Bertola, and Lucio Buson.* 364, 87, 195-A13 (1990)

HOLBERG, J. B. Spectroscopic Studies and Atmospheric Parameters of Pulsating DA White Dwarf (ZZ Ceti) Stars. *D. Daou, F. Wesemael, P. Bergeron, G. Fontaine, and J. B. Holberg.* 364, 242, 197-A11 (1990)

HOLMGREN, D. E. The Determination of Element Abundances in the Solar Neighborhood from B-Type Stellar Spectra. II. Non–LTE Calculations for Ar II. *D. E. Holmgren, P. J. F. Brown, P. L. Dufton, and F. P. Keenan.* 364, 657, 204-C11 (1990)

HONEYCUTT, R. KENT. Doppler Imaging of the Dwarf Nova U Geminorum. *T. R. Marsh, Keith Horne, Eric M. Schlegel, R. Kent Honeycutt, and Ronald H. Kaitchuck.* 364, 637, 204-B1 (1990)

HORNE, KEITH. Doppler Imaging of the Dwarf Nova U Geminorum. *T. R. Marsh, Keith Horne, Eric M. Schlegel, R. Kent Honeycutt, and Ronald H. Kaitchuck.* 364, 637, 204-B1 (1990)

ISOBE, TAKASHI. Linear Regression in Astronomy. I. *Takashi Isobe, Eric D. Feigelson, Michael G. Akritas, and Gutti Jogesh Babu.* 364, 104, 195-C7 (1990)

JAHODA, K. X-Ray Study of Superclusters. *M. Persic, K. Jahoda, Y. Rephaeli, E. Boldt, F. E. Marshall, R. F. Mushotzky, and G. Rawley.* 364, 1, 194-A12 (1990)

JEFFERIES, S. M. Modeling of Solar Oscillation Power Spectra. *E. R. Anderson, T. L. Duvall, Jr., and S. M. Jefferies.* 364, 699, 204-G4 (1990)

JENKINS, E. B. Interstellar Absorption along the Line of Sight to σ Scorpii Using *Copernicus* Observations: Erratum. *M. M. Allen, T. P. Snow, and E. B. Jenkins.* 364, 335, 198-B12 (1990) (Orig. paper in 355, 130, 88-E9 (1990))

JENNINGS, DONALD E. Observations of the 12.3 Micron Mg I Emission Line during a Major Solar Flare. *Drake Deming, Tilak Hewagama, Donald E. Jennings, Vladimir Osherovich, and Gunter Wiedemann.* 364, L49, 205-E7 (1990)

JOHNSON, HOLLIS R. Chromospheric Variability of M Giant Semiregular Variables. *Joel A. Eaton, Hollis R. Johnson, and Robert R. Cadmus, Jr.* 364, 259, 197-C4 (1990)

JURA, M. Very Dusty Carbon-rich Asymptotic Giant Branch Stars between ~1 and ~2.5 Kiloparsecs from the Sun. *M. Jura and S. G. Kleinmann.* 364, 663, 204-D5 (1990)

KAITCHUCK, RONALD H. Doppler Imaging of the Dwarf Nova U Geminorum. *T. R. Marsh, Keith Horne, Eric M. Schlegel, R. Kent Honeycutt, and Ronald H. Kaitchuck.* 364, 637, 204-B1 (1990)

KAJINO, T. Primordial Nucleosynthesis of Intermediate-Mass Elements in Baryon-Number–inhomogeneous Big Bang Models: Observational Tests. *T. Kajino, G. J. Mathews, and G. M. Fuller.* 364, 7, 194-B6 (1990)

KANDRUP, HENRY E. The Evolution of a System of Stars in an External Environment. *Henry E. Kandrup.* 364, 100, 195-C1 (1990)

Divergence of Nearby Trajectories for the Gravitational *N*-Body Problem. *Henry E. Kandrup.* 364, 420, 201-B13 (1990)

KAUFMAN, J. M. Frequencies of Solar Oscillations (Abstract of Paper in 1990 December Suppl.). *K. G. Libbrecht, M. F. Woodard, and J. M. Kaufman.* 364, 339, 198-C4 (1990)

KAYSER, R. New Observations and Gravitational Lens Models of the Cloverleaf Quasar H1413+117. *R. Kayser, J. Surdej, J. J. Condon, K. I. Kellermann, P. Magain, M. Remy, and A. Smette.* 364, 15, 194-C1 (1990)

KEEFE, HEIDI L. A Catalog of Observations for Stellar Masers (Abstract of Paper in 1990 December Suppl.). *Priscilla J. Benson, Irene R. Little-Marenin, Tara C. Woods, Joanne M. Attridge, Kristin A. Blais, Dana B. Rudolph, Myra E. Rubiera, and Heidi L. Keefe.* 364, 339, 198-C4 (1990)

KEENAN, F. P. The Determination of Element Abundances in the Solar Neighborhood from B-Type Stellar Spectra. II. Non–LTE Calculations for Ar II. *D. E. Holmgren, P. J. F. Brown, P. L. Dufton, and F. P. Keenan.* 364, 657, 204-C11 (1990)

KELLERMANN, K. I. New Observations and Gravitational Lens Models of the Cloverleaf Quasar H1413+117. *R. Kayser, J. Surdej, J. J. Condon, K. I. Kellermann, P. Magain, M. Remy, and A. Smette.* 364, 15, 194-C1 (1990)

KENNEY, J. D. P. Asymmetric Outflow in the Molecular Envelope of Mira. *P. Planesas, J. D. P. Kenney, and R. Bachiller.* 364, L9, 199-B8 (1990)

KILLIAN, T. C. Laboratory Detection of Propadienylidene, H_2CCC. *J. M. Vrtilek, C. A. Gottlieb, E. W. Gottlieb, T. C. Killian, and P. Thaddeus.* 364, L53, 205-E13 (1990)

KLEINMANN, S. G. Very Dusty Carbon-rich Asymptotic Giant Branch Stars between ~1 and ~2.5 Kiloparsecs from the Sun. *M. Jura and S. G. Kleinmann.* 364, 663, 204-D5 (1990)

KOO, BON-CHUL. Detection of an Expanding H I Shell in the Old Supernova Remnant CTB 80. *Bon-Chul Koo, William T. Reach, Carl Heiles, Robert A. Fesen, and J. Michael Shull.* 364, 178, 196-C5 (1990)

LADA, CHARLES J. Observations of the Dense Gas in the IRAS 16293–2422 Outflow System. *Christopher K. Walker, John E. Carlstrom, John H. Bieging, Charles J. Lada, and Erick T. Young.* 364, 173, 196-B12 (1990)

LAKE, GEORGE. An Empirical Look at the Origin of the Hubble Sequence. *George Lake.* 364, L1, 199-A7 (1990)

LAMY, P. L. On the Validity of Effective-Medium Theories in the Case of Light Extinction by Inhomogeneous Dust Particles. *J.-M. Perrin and P. L. Lamy.* 364, 146, 195-G4 (1990)

LECKENBY, HENRY J. The Discovery of Strong Neutral Atomic Carbon Absorption Lines in the Spectrum of the DAQZ5 White Dwarf in the Ultra–Short-Period Dwarf Nova WZ Sagittae during Quiescence. *Edward M. Sion, Henry J. Leckenby, and Paula Szkody.* 364, L41, 205-D11 (1990)

LIBBRECHT, K. G. Frequencies of Solar Oscillations (Abstract of Paper in 1990 December Suppl.). *K. G. Libbrecht, M. F. Woodard, and J. M. Kaufman.* 364, 339, 198-C4 (1990)

LIGHTMAN, ALAN P. The Ω Dependence of Peculiar Velocities Induced by Spherical Density Perturbations (Abstract of Paper in 1990 December Suppl.). *Alan P. Lightman and Paul L. Schechter.* 364, 336, 198-C1 (1990)

LIN, D. N. C. Wave Propagation in Gaseous Accretion Disks. *D. N. C. Lin, J. C. B. Papaloizou, and G. J. Savonije.* 364, 326, 198-B1 (1990)

LITTLE-MARENIN, IRENE R. A Catalog of Observations for Stellar Masers (Abstract of Paper in 1990 December Suppl.). *Priscilla J. Benson, Irene R. Little-Marenin, Tara C. Woods, Joanne M. Attridge, Kristin A. Blais, Dana B. Rudolph, Myra E. Rubiera, and Heidi L. Keefe.* 364, 339, 198-C4 (1990)

LOEB, A. A Possible Origin of Galactic Magnetic Fields. *R. A. Daly and A. Loeb.* 364, 451, 201-E12 (1990)

LUGGER, P. M. Four X-Ray–selected Cataclysmic Variables in the Galactic Plane. *P. Hertz, C. D. Bailyn, J. E. Grindlay, M. R. Garcia, H. Cohn, and P. M. Lugger.* 364, 251, 197-B8 (1990)

LUND, P. A. On the Anomalous Abundances of the 2×10^4–2×10^5 K Solar Atmosphere above a Sunspot. *U. Feldman, K. G. Widing, and P. A. Lund.* 364, L21, 199-D1 (1990)

MAGAIN, P. New Observations and Gravitational Lens Models of the Cloverleaf Quasar H1413+117. *R. Kayser, J. Surdej, J. J. Condon, K. I. Kellermann, P. Magain, M. Remy, and A. Smette.* 364, 15, 1[illegible]-C1 (1990)

MAJEWSKI, S. A Subdued Interpretation of the Visual and Infrared Emission from Merging Galaxies: Application to NGC 6240. *Harley A. Thronson, Jr., S. Majewski, Lara Descartes, and Mark Hereld.* 364, 456, 201-F5 (1990)

MAKINO, F. Simultaneous X-Ray, Ultraviolet, and Optical Observations of LMC X-3. *A. Treves, T. Belloni, R. H. D. Corbet, K. Ebisawa, R. Falomo, F. Makino, K. Makishima, L. Maraschi, S. Miyamoto, and E. G. Tanzi.* 364, 266, 197-C12 (1990)

MAKISHIMA, K. Simultaneous X-Ray, Ultraviolet, and Optical Observations of LMC X-3. *A. Treves, T. Belloni, R. H. D. Corbet, K. Ebisawa, R. Falomo, F. Makino, K. Makishima, L. Maraschi, S. Miyamoto, and E. G. Tanzi.* 364, 266, 197-C12 (1990)

MARASCHI, L. Simultaneous X-Ray, Ultraviolet, and Optical Observations of LMC X-3. *A. Treves, T. Belloni, R. H. D. Corbet, K. Ebisawa, R. Falomo, F. Makino, K. Makishima, L. Maraschi, S. Miyamoto, and E. G. Tanzi.* 364, 266, 197-C12 (1990)

MARSH, T. R. Doppler Imaging of the Dwarf Nova U Geminorum. *T. R. Marsh, Keith Horne, Eric M. Schlegel, R. Kent Honeycutt, and Ronald H. Kaitchuck.* 364, 637, 204-B1 (1990)

MARSHALL, F. E. X-Ray Study of Superclusters. *M. Persic, K. Jahoda, Y. Rephaeli, E. Boldt, F. E. Marshall, R. F. Mushotzky, and G. Rawley.* 364, 1, 194-A12 (1990)

MATHEWS, G. J. Primordial Nucleosynthesis of Intermediate-Mass Elements in Baryon-Number–inhomogeneous Big Bang Models: Observational Tests. *T. Kajino, G. J. Mathews, and G. M. Fuller.* 364, 7, 194-B6 (1990)

MATRAVERS, D. R. Density Waves in Cosmology. *G. F.-R. Ellis, C. Hellaby, and D. R. Matravers.* 364, 400, 200-G12 (1990)

MCGILL, COLIN. Detecting Clusters in Galaxy Catalogs. *Colin McGill and H. M. P. Couchman.* 364, 426, 201-C7 (1990)

MCKEAN, M. E. Modeling Solar Flare Conduction Fronts. I. Homogeneous Plasmas and Ion-acoustic Turbulence. *M. E. McKean, R. M. Winglee, and G. A. Dulk.* 364, 295, 197-F5 (1990)

Modeling Solar Flare Conduction Fronts. II. Inhomogeneous Plasmas and Ambipolar Electric Fields. *M. E. McKean, R. M. Winglee, and G. A. Dulk.* 364, 302, 197-G1 (1990)

MELOTT, ADRIAN L. Minimal Spectrum of Long-Wave Perturbations: Is Linear Growth Correct Only in the Nonlinear Regime? *Sergei F. Shandarin and Adrian L. Melott.* 364, 396, 200-G9 (1990)

MÉNARD, FRANÇOIS. Parameters of Disks around Young Stellar Objects from Polarization Observations. *Pierre Bastien and François Ménard.* 364, 232, 196-G13 (1990)

MENTEN, K. M. First Images of Water Vapor Masers in the Galaxy M33. *L. J. Greenhill, J. M. Moran, M. J. Reid, C. R. Gwinn, K. M. Menten, A. Eckart, and H. Hirabayashi.* 364, 513, 202-E1 (1990)

95 GHz Methanol Masers near DR 21 and DR 21(OH). *R. L. Plambeck and K. M. Menten.* 364, 555, 203-A9 (1990)

MEYER, DAVID M. Small-Scale Structure in the Diffuse Interstellar Medium. *David M. Meyer.* 364, L5, 199-B1 (1990)

MILEY, GEORGE K. The Optical Emission-Line Nebulae of Powerful Far-Infrared Galaxies. *Lee Armus, Timothy M. Heckman, and George K. Miley.* 364, 471, 201-G11 (1990)

On the Nature and Implications of Starburst-driven Galactic Superwinds (Abstract of Paper in 1990 December Suppl.). *Timothy M. Heckman, Lee Armus, and George K. Miley.* 364, 336, 198-C1 (1990)

MITCHELL, KENNETH J. Faint Blue Objects at High Galactic Latitude. VI. Palomar Schmidt Field Centered On Selected Area 82 (Abstract of Paper in 1990 December Suppl.). *Peter D. Usher and Kenneth J. Mitchell.* 364, 337, 198-C2 (1990)

MIYAMOTO, S. Simultaneous X-Ray, Ultraviolet, and Optical Observations of LMC X-3. *A. Treves, T. Belloni, R. H. D. Corbet, K. Ebisawa, R. Falomo, F. Makino, K. Makishima, L. Maraschi, S. Miyamoto, and E. G. Tanzi.* 364, 266, 197-C12 (1990)

MOFFAT, A. F. J. The Wolf-Rayet Star Population in the Most Massive Giant H II Regions of M33. *L. Drissen, A. F. J. Moffat, and M. M. Shara.* 364, 496, 202-C10 (1990)

MORAN, J. M. First Images of Water Vapor Masers in the Galaxy M33. *L. J. Greenhill, J. M. Moran, M. J. Reid, C. R. Gwinn, K. M. Menten, A. Eckart, and H. Hirabayashi.* 364, 513, 202-E1 (1990)

MOUNTAIN, C. M. Molecular and Atomic Hydrogen Line Emission from Star-forming Galaxies. *P. J. Puxley, T. G. Hawarden, and C. M. Mountain.* 364, 77, 195-A1 (1990)

MUNDY, LEE G. High-Resolution, Far-Infrared Observations of NGC 2071. *Harold M. Butner, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Antonella Natta, and Maria Sofia Randich.* 364, 164, 196-B1 (1990)

MUSHOTZKY, R. F. X-Ray Study of Superclusters. *M. Persic, K. Jahoda, Y. Rephaeli, E. Boldt, F. E. Marshall, R. F. Mushotzky, and G. Rawley.* 364, 1, 194-A12 (1990)

MYRA, ERIC S. Neutrinos from Type II Supernovae: The First 100 Milliseconds. *Eric S. Myra and Adam Burrows.* 364, 222, 196-G1 (1990)

NATTA, ANTONELLA. High-Resolution, Far-Infrared Observations of NGC 2071. *Harold M. Butner, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Antonella Natta, and Maria Sofia Randich.* 364, 164, 196-B1 (1990)

NEL, H. I. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* 364, L37, 205-D5 (1990)

NORTH, A. R. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* 364, L37, 205-D5 (1990)

NÚÑEZ, L. A. Luminosity Profiles and the Evolution of Shock Waves in General Relativistic Radiating Spheres. *L. Herrera and L. A. Núñez.* 364, 212, 196-F4 (1990)

O'CONNELL, ROBERT W. Spectral Synthesis in the Ultraviolet. III. The Spectral Morphology of Normal Stars in the Mid-Ultraviolet.

Michael N. Fanelli, Robert W. O'Connell, David Burstein, and Chi-Chao Wu. **364**, 272, 197-D6 (1990)

OBERTO, YVETTE. The Evolution of ^{9}Be. *Elisabeth Vangioni-Flam, Michel Cassé, Jean Audouze, and Yvette Oberto.* **364**, 568, 203-B12 (1990)

OROFINO, V. Temperature Behavior of Infrared Spectra of Polycyclic Aromatic Hydrocarbons and the Unidentified Infrared Bands. *A. Blanco, S. Fonti, and V. Orofino.* **364**, 152, 195-G12 (1990)

OSHEROVICH, VLADIMIR. Observations of the 12.3 Micron Mg I Emission Line during a Major Solar Flare. *Drake Deming, Tilak Hewagama, Donald E. Jennings, Vladimir Osherovich, and Gunter Wiedemann.* **364**, L49, 205-E7 (1990)

OSTRIKER, J. P. Dust in QSO Absorption-Line Systems. *J. P. Ostriker, M. S. Vogeley, and D. G. York.* **364**, 405, 201-A5 (1990)

PACZYŃSKI, BOHDAN. A Dipole Moment of the Microwave Background as a Cosmological Effect. *Bohdan Paczyński and Tsvi Piran.* **364**, 341, 200-C1 (1990)

PANAGIA, NINO. Radio Emission from Supernovae. II. SN 1986J: A Different Kind of Type II. *Kurt W. Weiler, Nino Panagia, and Richard A. Sramek.* **364**, 611, 203-F13 (1990)

PAPALOIZOU, J. C. B. Wave Propagation in Gaseous Accretion Disks. *D. N. C. Lin, J. C. B. Papaloizou, and G. J. Savonije.* **364**, 326, 198-B1 (1990)

PARSONS, SIDNEY B. HD 51956: A Supergiant in an Interacting Binary. *Sidney B. Parsons and Thomas B. Ake.* **364**, L13, 199-C1 (1990)

PERRIN, J.-M. On the Validity of Effective-Medium Theories in the Case of Light Extinction by Inhomogeneous Dust Particles. *J.-M. Perrin and P. L. Lamy.* **364**, 146, 195-G4 (1990)

PERSIC, M. X-Ray Study of Superclusters. *M. Persic, K. Jahoda, Y. Rephaeli, E. Boldt, F. E. Marshall, R. F. Mushotzky, and G. Rawley.* **364**, 1, 194-A12 (1990)

PERSINGER, TIMOTHY. MAP–based Trigonometric Parallaxes of Open Clusters: The Pleiades. *George Gatewood, Michael Castelaz, Inwoo Han, Timothy Persinger, John Stein, Bruce Stephenson, and William Tangren.* **364**, 114, 195-D5 (1990)

PETRE, ROBERT. On the Interpretation of the *EXOSAT* Photometry of Two Hot DA White Dwarfs. *Stéphane Vennes, Harry L. Shipman, and Robert Petre.* **364**, 647, 204-B13 (1990)

PIERCE, MICHAEL J. The Dustiness, Luminosity, and Metallicity of Galaxies. *Sidney van den Bergh and Michael J. Pierce.* **364**, 444, 201-D14 (1990)

PIRAN, TSVI. A Dipole Moment of the Microwave Background as a Cosmological Effect. *Bohdan Paczyński and Tsvi Piran.* **364**, 341, 200-C1 (1990)

PLAMBECK, R. L. 95 GHz Methanol Masers near DR 21 and DR 21(OH). *R. L. Plambeck and K. M. Menten.* **364**, 555, 203-A9 (1990)

PLANESAS, P. Asymmetric Outflow in the Molecular Envelope of Mira. *P. Planesas, J. D. P. Kenney, and R. Bachiller.* **364**, L9, 199-B8 (1990)

PRICE, P. B. A Search for Charged Massive Particles in *IMP 8* Data. *D. P. Snowden-Iffft, S. W. Barwick, and P. B. Price.* **364**, L25, 205-C1 (1990)

PUGET, J. L. Variations in the Abundance of Transiently Heated Particles within Nearby Molecular Clouds. *F. Boulanger, E. Falgarone, J. L. Puget, and G. Helou.* **364**, 136, 195-F5 (1990)

PUXLEY, P. J. Molecular and Atomic Hydrogen Line Emission from Star-forming Galaxies. *P. J. Puxley, T. G. Hawarden, and C. M. Mountain.* **364**, 77, 195-A1 (1990)

RAGA, A. C. Stellar Jets with Intrinsically Variable Sources. *A. C. Raga, J. Cantó, L. Binette, and N. Calvet.* **364**, 601, 203-F1 (1990)

RANDICH, MARIA SOFIA. High-Resolution, Far-Infrared Observations of NGC 2071. *Harold M. Butner, Neal J. Evans II, Paul M. Harvey, Lee G. Mundy, Antonella Natta, and Maria Sofia Randich.* **364**, 164, 196-B1 (1990)

RAUBENHEIMER, B. C. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* **364**, L37, 205-D5 (1990)

RAWLEY, G. X-Ray Study of Superclusters. *M. Persic, K. Jahoda, Y. Rephaeli, E. Boldt, F. E. Marshall, R. F. Mushotzky, and G. Rawley.* **364**, 1, 194-A12 (1990)

REACH, WILLIAM T. Detection of an Expanding H I Shell in the Old Supernova Remnant CTB 80. *Bon-Chul Koo, William T. Reach, Carl Heiles, Robert A. Fesen, and J. Michael Shull.* **364**, 178, 196-C5 (1990)

REID, M. J. First Images of Water Vapor Masers in the Galaxy M33. *L. J. Greenhill, J. M. Moran, M. J. Reid, C. R. Gwinn, K. M. Menten, A. Eckart, and H. Hirabayashi.* **364**, 513, 202-E1 (1990)

REMY, M. New Observations and Gravitational Lens Models of the Cloverleaf Quasar H1413+117. *R. Kayser, J. Surdej, J. J. Condon, K. I. Kellermann, P. Magain, M. Remy, and A. Smette.* **364**, 15, 194-C1 (1990)

RENZINI, ALVIO. Clues on the Hot Star Content and the Ultraviolet Output of Elliptical Galaxies. *Laura Greggio and Alvio Renzini.* **364**, 35, 194-D12 (1990)

The Development of the Red Giant Branch. II. Astrophysical Properties. *Allen V. Sweigart, Laura Greggio, and Alvio Renzini.* **364**, 527, 202-F3 (1990)

REPHAELI, Y. X-Ray Study of Superclusters. *M. Persic, K. Jahoda, Y. Rephaeli, E. Boldt, F. E. Marshall, R. F. Mushotzky, and G. Rawley.* **364**, 1, 194-A12 (1990)

ROBINSON, RICHARD D. Chromospheric Hα and Ca II Lines in Late-Type Stars (Abstract of Paper in 1990 December Suppl.). *Richard D. Robinson, Lawrence E. Cram, and Mark S. Giampapa.* **364**, 338, 198-C3 (1990)

RUBIERA, MYRA E. A Catalog of Observations for Stellar Masers (Abstract of Paper in 1990 December Suppl.). *Priscilla J. Benson, Irene R. Little-Marenin, Tara C. Woods, Joanne M. Attridge, Kristin A. Blais, Dana B. Rudolph, Myra E. Rubiera, and Heidi L. Keefe.* **364**, 339, 198-C4 (1990)

RUDOLPH, DANA B. A Catalog of Observations for Stellar Masers (Abstract of Paper in 1990 December Suppl.). *Priscilla J. Benson, Irene R. Little-Marenin, Tara C. Woods, Joanne M. Attridge, Kristin A. Blais, Dana B. Rudolph, Myra E. Rubiera, and Heidi L. Keefe.* **364**, 339, 198-C4 (1990)

SARAZIN, CRAIG L. Optical Coronal Emission Lines from Equilibrium and Cooling Plasmas. *Christopher M. Graney and Craig L. Sarazin.* **364**, 561, 203-B3 (1990)

SAVONIJE, G. J. Wave Propagation in Gaseous Accretion Disks. *D. N. C. Lin, J. C. B. Papaloizou, and G. J. Savonije.* **364**, 326, 198-B1 (1990)

SCARSI, L. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* **364**, L37, 205-D5 (1990)

SCHAEFER, BRADLEY E. Gamma-Ray Burster Counterparts: Archival Data. *Bradley E. Schaefer.* **364**, 590, 203-D11 (1990)

SCHECHTER, PAUL L. The Ω Dependence of Peculiar Velocities Induced by Spherical Density Perturbations (Abstract of Paper in 1990 December Suppl.). *Alan P. Lightman and Paul L. Schechter.* **364**, 336, 198-C1 (1990)

SCHLEGEL, ERIC M. Doppler Imaging of the Dwarf Nova U Geminorum. *T. R. Marsh, Keith Horne, Eric M. Schlegel, R. Kent Honeycutt, and Ronald H. Kaitchuck.* **364**, 637, 204-B1 (1990)

SCHLOERB, F. PETER. High Spectral Resolution Observations and Kinematic Modeling of the 1667 MHz Hyperfine Transition of OH in Comets Halley (1982i), Giacobini-Zinner (1984e), Hartley-Good (1985l), Thiele (1985m), and Wilson (1986l). *L. E. Tacconi-Garman, F. Peter Schloerb, and M. J. Claussen.* **364**, 672, 204-E1 (1990)

SCHMIDT, GARY D. An Optical Polarization Survey of the Palomar-Green Bright Quasar Sample (Abstract of Paper in 1990 December Suppl.). *Graham Berriman, Gary D. Schmidt, S. C. West, and H. S. Stockman.* **364**, 337, 198-C2 (1990)

SCHMITT, J. H. M. M. A Color Gradient in the Soft X-Ray Diffuse Background. *S. L. Snowden, J. H. M. M. Schmitt, and B. C. Edwards.* **364**, 118, 195-D11 (1990)

SCHÖNFELDER, V. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser,*

R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos. **364**, L37, 205-D5 (1990)

SCHWEIZER, FRANÇOIS. Correlations between Line Strengths and Fine Structure in Elliptical Galaxies. *François Schweizer, Patrick Seitzer, S. M. Faber, David Burstein, Cristina M. Dalle Ore, and J. Jesus Gonzalez.* **364**, L33, 205-C13 (1990)

SCIAMA, D. W. Dark Matter Decay and the Ionization of H I Regions in the Galaxy. *D. W. Sciama.* **364**, 549, 203-A1 (1990)

SEAQUIST, E. R. Molecular Absorption by the Dust Lane and Nuclear Region of Centaurus A. *E. R. Seaquist and M. B. Bell.* **364**, 94, 195-B8 (1990)

SEITZER, PATRICK. Correlations between Line Strengths and Fine Structure in Elliptical Galaxies. *François Schweizer, Patrick Seitzer, S. M. Faber, David Burstein, Cristina M. Dalle Ore, and J. Jesus Gonzalez.* **364**, L33, 205-C13 (1990)

SEMBACH, K. Studies of the Local Interstellar Medium. VIII. Morphology and Kinematics of the Diffuse Interstellar Clouds toward Orion. *P. C. Frisch, K. Sembach, and D. G. York.* **364**, 540, 202-G4 (1990)

SHANDARIN, SERGEI F. Minimal Spectrum of Long-Wave Perturbations: Is Linear Growth Correct Only in the Nonlinear Regime? *Sergei F. Shandarin and Adrian L. Melott.* **364**, 396, 200-G9 (1990)

SHARA, M. M. The Wolf-Rayet Star Population in the Most Massive Giant H II Regions of M33. *L. Drissen, A. F. J. Moffat, and M. M. Shara.* **364**, 496, 202-C10 (1990)

SHARPLES, R. M. Michigan 160: Internal Kinematics and the Cosmic Distance Scale. *L. Staveley-Smith, J. Bland, D. J. Axon, R. D. Davies, and R. M. Sharples.* **364**, 23, 194-C11 (1990)

SHIPMAN, HARRY L. On the Interpretation of the *EXOSAT* Photometry of Two Hot DA White Dwarfs. *Stéphane Vennes, Harry L. Shipman, and Robert Petre.* **364**, 647, 204-B13 (1990)

SHULL, J. MICHAEL. Detection of an Expanding H I Shell in the Old Supernova Remnant CTB 80. *Bon-Chul Koo, William T. Reach, Carl Heiles, Robert A. Fesen, and J. Michael Shull.* **364**, 178, 196-C5 (1990)

SION, EDWARD M. The Discovery of Strong Neutral Atomic Carbon Absorption Lines in the Spectrum of the DAQZ5 White Dwarf in the Ultra–Short-Period Dwarf Nova WZ Sagittae during Quiescence. *Edward M. Sion, Henry J. Leckenby, and Paula Szkody.* **364**, L41, 205-D11 (1990)

SLANE, PATRICK. TeV Gamma-Ray Production in Accreting Black Hole Systems. *Patrick Slane and Sanjay M. Wagh.* **364**, 198, 196-E1 (1990)

SMETTE, A. New Observations and Gravitational Lens Models of the Cloverleaf Quasar H1413+117. *R. Kayser, J. Surdej, J. J. Condon, K. I. Kellermann, P. Magain, M. Remy, and A. Smette.* **364**, 15, 194-C1 (1990)

SNOW, T. P. Interstellar Absorption along the Line of Sight to σ Scorpii Using *Copernicus* Observations: Erratum. *M. M. Allen, T. P. Snow, and E. B. Jenkins.* **364**, 335, 198-B12 (1990) (Orig. paper in 355, 130, 88-E9 (1990))

SNOWDEN, S. L. A Color Gradient in the Soft X-Ray Diffuse Background. *S. L. Snowden, J. H. M. M. Schmitt, and B. C. Edwards.* **364**, 118, 195-D11 (1990)

SNOWDEN-IFFT, D. P. A Search for Charged Massive Particles in *IMP 8* Data. *D. P. Snowden-Ifft, S. W. Barwick, and P. B. Price.* **364**, L25, 205-C1 (1990)

SOLTAN, ANDRZEJ. A Search for Small-Scale X-Ray Surface Brightness Fluctuations in Clusters of Galaxies. *Andrzej Soltan and Daniel G. Fabricant.* **364**, 433, 201-D1 (1990)

SRAMEK, RICHARD A. Radio Emission from Supernovae. II. SN 1986J: A Different Kind of Type II. *Kurt W. Weiler, Nino Panagia, and Richard A. Sramek.* **364**, 611, 203-F13 (1990)

STAVELEY-SMITH, L. Michigan 160: Internal Kinematics and the Cosmic Distance Scale. *L. Staveley-Smith, J. Bland, D. J. Axon, R. D. Davies, and R. M. Sharples.* **364**, 23, 194-C11 (1990)

STEIN, JOHN. MAP–based Trigonometric Parallaxes of Open Clusters: The Pleiades. *George Gatewood, Michael Castelaz, Inwoo Han, Timothy Persinger, John Stein, Bruce Stephenson, and William Tangren.* **364**, 114, 195-D5 (1990)

STEPHENSON, BRUCE. MAP–based Trigonometric Parallaxes of Open Clusters: The Pleiades. *George Gatewood, Michael Castelaz, Inwoo Han, Timothy Persinger, John Stein, Bruce Stephenson, and William Tangren.* **364**, 114, 195-D5 (1990)

STOCKMAN, H. S. An Optical Polarization Survey of the Palomar-Green Bright Quasar Sample (Abstract of Paper in 1990 December Suppl.). *Graham Berriman, Gary D. Schmidt, S. C. West, and H. S. Stockman.* **364**, 337, 198-C2 (1990)

SURDEJ, J. New Observations and Gravitational Lens Models of the Cloverleaf Quasar H1413+117. *R. Kayser, J. Surdej, J. J. Condon, K. I. Kellermann, P. Magain, M. Remy, and A. Smette.* **364**, 15, 194-C1 (1990)

SWEIGART, ALLEN V. The Development of the Red Giant Branch. II. Astrophysical Properties. *Allen V. Sweigart, Laura Greggio, and Alvio Renzini.* **364**, 527, 202-F3 (1990)

SZKODY, PAULA. The Discovery of Strong Neutral Atomic Carbon Absorption Lines in the Spectrum of the DAQZ5 White Dwarf in the Ultra–Short-Period Dwarf Nova WZ Sagittae during Quiescence. *Edward M. Sion, Henry J. Leckenby, and Paula Szkody.* **364**, L41, 205-D11 (1990)

TACCONI-GARMAN, L. E. High Spectral Resolution Observations and Kinematic Modeling of the 1667 MHz Hyperfine Transition of OH in Comets Halley (1982i), Giacobini-Zinner (1984e), Hartley-Good (1985l), Thiele (1985m), and Wilson (1986l). *L. E. Tacconi-Garman, F. Peter Schloerb, and M. J. Claussen.* **364**, 672, 204-E1 (1990)

TANGREN, WILLIAM. MAP–based Trigonometric Parallaxes of Open Clusters: The Pleiades. *George Gatewood, Michael Castelaz, Inwoo Han, Timothy Persinger, John Stein, Bruce Stephenson, and William Tangren.* **364**, 114, 195-D5 (1990)

TANZI, E. G. Simultaneous X-Ray, Ultraviolet, and Optical Observations of LMC X-3. *A. Treves, T. Belloni, R. H. D. Corbet, K. Ebisawa, R. Falomo, F. Makino, K. Makishima, L. Maraschi, S. Miyamoto, and E. G. Tanzi.* **364**, 266, 197-C12 (1990)

THADDEUS, P. Laboratory Detection of Propadienylidene, H_2CCC. *J. M. Vrtilek, C. A. Gottlieb, E. W. Gottlieb, T. C. Killian, and P. Thaddeus.* **364**, L53, 205-E13 (1990)

THRONSON, HARLEY A., JR. A Subdued Interpretation of the Visual and Infrared Emission from Merging Galaxies: Application to NGC 6240. *Harley A. Thronson, Jr., S. Majewski, Lara Descartes, and Mark Hereld.* **364**, 456, 201-F5 (1990)

TREVES, A. Simultaneous X-Ray, Ultraviolet, and Optical Observations of LMC X-3. *A. Treves, T. Belloni, R. H. D. Corbet, K. Ebisawa, R. Falomo, F. Makino, K. Makishima, L. Maraschi, S. Miyamoto, and E. G. Tanzi.* **364**, 266, 197-C12 (1990)

TRIPP, TODD M. *IUE* Observations of PG 1115+080: The He I Gunn-Peterson Test and a Search for the Lensing Galaxy. *Todd M. Tripp, Richard F. Green, and Jill Bechtold.* **364**, L29, 205-C7 (1990)

UNDERHILL, A. B. Notes on the Radial Velocities of 14 O Stars and the Emission Lines in Their Spectra. *A. B. Underhill and K. K. Gilroy.* **364**, 626, 204-A3 (1990)

USHER, PETER D. Faint Blue Objects at High Galactic Latitude. VI. Palomar Schmidt Field Centered On Selected Area 82 (Abstract of Paper in 1990 December Suppl.). *Peter D. Usher and Kenneth J. Mitchell.* **364**, 337, 198-C2 (1990)

VAN DEN BERGH, SIDNEY. The Dustiness, Luminosity, and Metallicity of Galaxies. *Sidney van den Bergh and Michael J. Pierce.* **364**, 444, 201-D14 (1990)

VAN DER WALT, D. J. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* **364**, L37, 205-D5 (1990)

VAN DER WERF, PAUL P. Subparsec-Size H I Cloudlets Associated with Orion A. *Paul P. van der Werf and W. M. Goss.* **364**, 157, 196-A5 (1990)

VANGIONI-FLAM, ELISABETH. The Evolution of ^{9}Be. *Elisabeth Vangioni-Flam, Michel Cassé, Jean Audouze, and Yvette Oberto.* **364**, 568, 203-B12 (1990)

VAN URK, G. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo,*

L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos. **364**, L37, 205-D5 (1990)

VARENDORF, M. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* **364**, L37, 205-D5 (1990)

VENNES, STÉPHANE. On the Interpretation of the *EXOSAT* Photometry of Two Hot DA White Dwarfs. *Stéphane Vennes, Harry L. Shipman, and Robert Petre.* **364**, 647, 204-B13 (1990)

VISSER, B. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* **364**, L37, 205-D5 (1990)

VOGELEY, M. S. Dust in QSO Absorption-Line Systems. *J. P. Ostriker, M. S. Vogeley, and D. G. York.* **364**, 405, 201-A5 (1990)

VON BALLMOOS, P. MeV to TeV Gamma-Ray Observations of PSR 1957+20. *C. Brink, O. C. de Jager, B. C. Raubenheimer, H. I. Nel, A. R. North, D. J. van der Walt, G. van Urk, B. Visser, R. Buccheri, C. M. Carollo, L. Scarsi, V. Schönfelder, M. Varendorf, and P. von Ballmoos.* **364**, L37, 205-D5 (1990)

VRTILEK, J. M. Laboratory Detection of Propadienylidene, H_2CCC. *J. M. Vrtilek, C. A. Gottlieb, E. W. Gottlieb, T. C. Killian, and P. Thaddeus.* **364**, L53, 205-E13 (1990)

WAGH, SANJAY M. TeV Gamma-Ray Production in Accreting Black Hole Systems. *Patrick Slane and Sanjay M. Wagh.* **364**, 198, 196-E1 (1990)

WALKER, CHRISTOPHER K. Observations of the Dense Gas in the IRAS 16293−2422 Outflow System. *Christopher K. Walker, John E. Carlstrom, John H. Bieging, Charles J. Lada, and Erick T. Young.* **364**, 173, 196-B12 (1990)

WEILER, KURT W. Radio Emission from Supernovae. II. SN 1986J: A Different Kind of Type II. *Kurt W. Weiler, Nino Panagia, and Richard A. Sramek.* **364**, 611, 203-F13 (1990)

WELTY, D. E. Predicted Profiles of Ultraviolet Interstellar Absorption Lines (Abstract of Paper in 1991 February Suppl.). *D. E. Welty, L. M. Hobbs, and D. G. York.* **364**, 338, 198-C3 (1990)

WESEMAEL, F. Spectroscopic Studies and Atmospheric Parameters of Pulsating DA White Dwarf (ZZ Ceti) Stars. *D. Daou, F. Wesemael, P. Bergeron, G. Fontaine, and J. B. Holberg.* **364**, 242, 197-A11 (1990)

WEST, S. C. An Optical Polarization Survey of the Palomar-Green Bright Quasar Sample (Abstract of Paper in 1990 December Suppl.). *Graham Berriman, Gary D. Schmidt, S. C. West, and H. S. Stockman.* **364**, 337, 198-C2 (1990)

WIDING, K. G. On the Anomalous Abundances of the 2×10^4–2×10^5 K Solar Atmosphere above a Sunspot. *U. Feldman, K. G. Widing, and P. A. Lund.* **364**, L21, 199-D1 (1990)

WIEDEMANN, GUNTER. Observations of the 12.3 Micron Mg I Emission Line during a Major Solar Flare. *Drake Deming, Tilak Hewagama, Donald E. Jennings, Vladimir Osherovich, and Gunter Wiedemann.* **364**, L49, 205-E7 (1990)

WILCOTS, ERIC M. Ultraviolet Observations of NGC 205. *Eric M. Wilcots, Paul Hodge, Paul B. Eskridge, Francesco Bertola, and Lucio Buson.* **364**, 87, 195-A13 (1990)

WINGLEE, R. M. Modeling Solar Flare Conduction Fronts. I. Homogeneous Plasmas and Ion-acoustic Turbulence. *M. E. McKean, R. M. Winglee, and G. A. Dulk.* **364**, 295, 197-F5 (1990)

Modeling Solar Flare Conduction Fronts. II. Inhomogeneous Plasmas and Ambipolar Electric Fields. *M. E. McKean, R. M. Winglee, and G. A. Dulk.* **364**, 302, 197-G1 (1990)

WITT, A. N. The Spatial Distribution of Extended Red Emission in the Planetary Nebula NGC 7027. *D. G. Furton and A. N. Witt.* **364**, L45, 205-E1 (1990)

WOODARD, M. F. Frequencies of Solar Oscillations (Abstract of Paper in 1990 December Suppl.). *K. G. Libbrecht, M. F. Woodard, and J. M. Kaufman.* **364**, 339, 198-C4 (1990)

WOODS, TARA C. A Catalog of Observations for Stellar Masers (Abstract of Paper in 1990 December Suppl.). *Priscilla J. Benson, Irene R. Little-Marenin, Tara C. Woods, Joanne M. Attridge, Kristin A. Blais, Dana B. Rudolph, Myra E. Rubiera, and Heidi L. Keefe.* **364**, 339, 198-C4 (1990)

WU, CHI-CHAO. Spectral Synthesis in the Ultraviolet. III. The Spectral Morphology of Normal Stars in the Mid-Ultraviolet. *Michael N. Fanelli, Robert W. O'Connell, David Burstein, and Chi-Chao Wu.* **364**, 272, 197-D6 (1990)

YORK, D. G. Dust in QSO Absorption-Line Systems. *J. P. Ostriker, M. S. Vogeley, and D. G. York.* **364**, 405, 201-A5 (1990)

Studies of the Local Interstellar Medium. VIII. Morphology and Kinematics of the Diffuse Interstellar Clouds toward Orion. *P. C. Frisch, K. Sembach, and D. G. York.* **364**, 540, 202-G4 (1990)

Predicted Profiles of Ultraviolet Interstellar Absorption Lines (Abstract of Paper in 1991 February Suppl.). *D. E. Welty, L. M. Hobbs, and D. G. York.* **364**, 338, 198-C3 (1990)

YOUNG, ERICK T. Observations of the Dense Gas in the IRAS 16293−2422 Outflow System. *Christopher K. Walker, John E. Carlstrom, John H. Bieging, Charles J. Lada, and Erick T. Young.* **364**, 173, 196-B12 (1990)